MELICERTUS SIMILIS, A NEW SPECIES OF PRAWN, DECAPODA: PENAEIDAE, FROM INDIA[1]

(*With six text-figures*)

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A new species of penaeid prawn *Melicertus similis* from Andaman Sea at Port Blair in India is described. This new species is similar to *Melicertus canaliculatus* (Olivier 1811) but can be distinguished from it by the presence of a short ischial spine on the first pereiopod, absence of disto-median projection on petasma, a chisel-shaped anterior plate on the thelycum and a wide gap between lateral plates.

INTRODUCTION

The genus *Penaeus* was subdivided into six subgenera (Holthuis 1980). Recently, these subgenera were raised to generic rank by Perez-Farfante and Kensley (1997). The genus *Melicertus* is represented by two species in the Indian sub-region namely, *M. canaliculatus* (Olivier 1811) and *M. latisulcatus* (Krishinouye 1896). The material on which the present paper is based was collected by Dr. H.C. Roy of the Zoological Survey of India (ZSI) in 1952 and is preserved in the ZSI collection. The species status of this collection had remained undetermined since then. The specimens are apparently similar to *M. canaliculatus* (Olivier 1811). Close examination, however, revealed it to be a species hitherto undescribed and new to science. A detailed description is given below.

Much of the terminology used in the description is after Perez-Farfante (1976). Carapace length is the distance between the orbital margin and the mid-posterior margin of the carapace, and total length is the distance from the apex of the rostrum to the telson.

Melicertus similis sp. nov.

(Figs 1-6)

Material examined: Port Blair, Andaman Is., Bay of Bengal, 24.iii.1952; holotype: 1 female, 75 mm; allotype 1 male, 59 mm, paratypes: 3 females, 75-80 mm & 3 males, 59-60 mm; all from the same locality.

The types are deposited in the reference collection of the Zoological Survey of India Regn. No. C4622/2 (holotype), C4624/2 (allotype) and C4623/2 (paratypes).

DESCRIPTION

Rostral tooth 10-11/ 1 (10 in male; 11 in female), ventral tooth placed beyond the frontal dorsal teeth. Rostrum reaching almost to tip of antennular peduncle, curving downward up to ventral tooth, reaching its greatest height at fifth tooth, distal non-toothed portion slightly upcurved. Post-rostral carina feebly sulcate, post-rostral sulcus nearly half of carapace length. Dorsal carina extending up to 0.95 of length of carapace from anterior margin.

Gastro-frontal sulcus deep, bifurcated posteriorly, small carina causing this bifurcation reaching nearly one-third length of sulcus; gastro-frontal carina prominent and extending to orbital angle, forming blunt supraorbital spine. Antennal spine long. Gastro-orbital carina pronounced, ending near the orbital angle. Hepatic spine prominent and short orbito-frontal sulcus narrowing posteriorly and reaching hepatic sulcus, cervical sulcus reaching orbito-antennal sulcus from upper side of hepatic spine, branchiocardiac carina very thin.

Antennular flagella very small and

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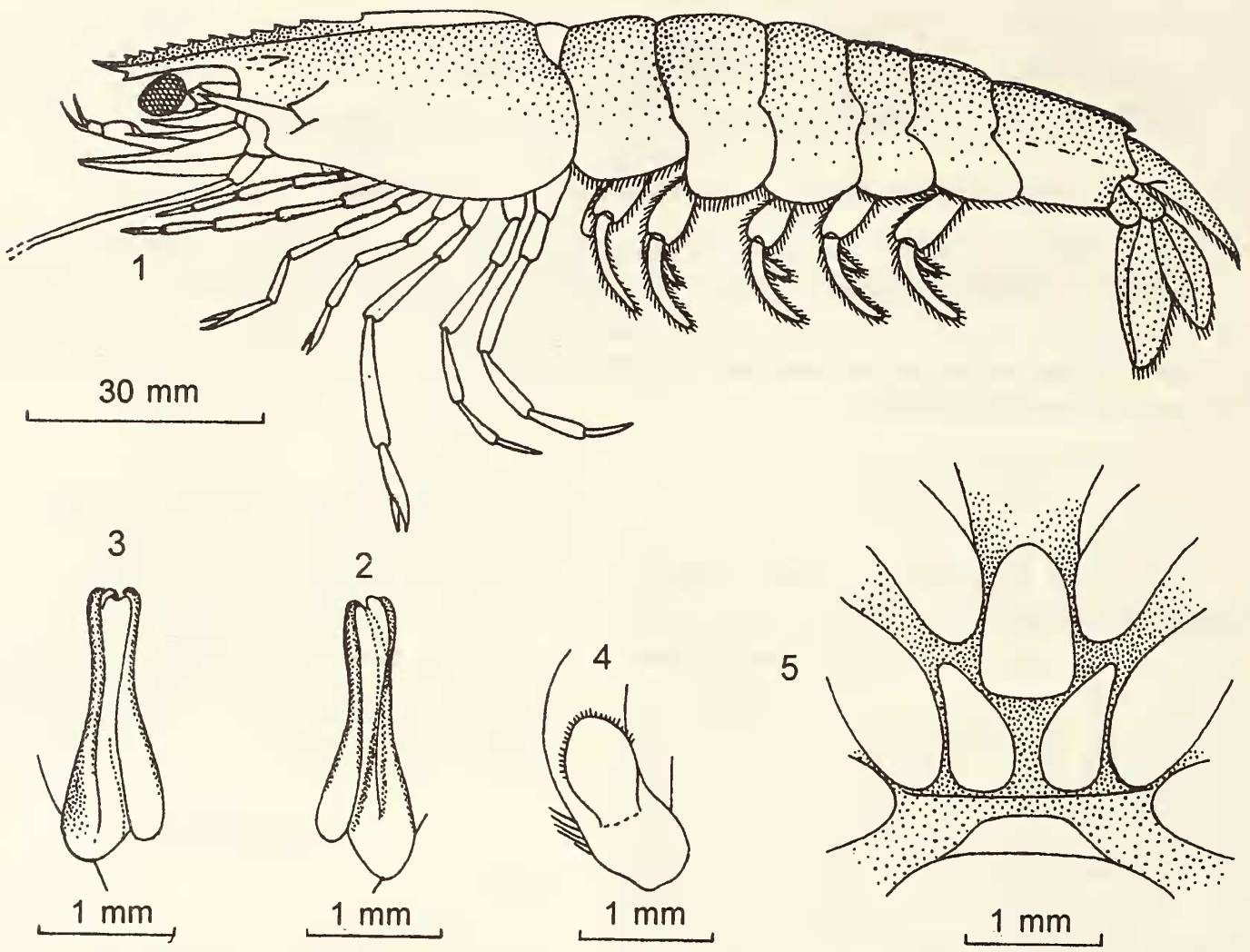

Figs 1-6: *Melicertus similis* sp. nov., 1. Lateral view, 2. Dorsal view of Petasma, 3. Ventral view of Petasma, 4. Appendix masculina, 5. Thelycum, 6. First pereiopod

subequal, one-fourth length of peduncle. Prosartema not exceeding the basal segments stylocerite attaining mid-length of basal segment.

Third maxilliped extending up to second antennular segment. First pereiopod extending up to the base of first segment of antennular peduncle, second extending beyond half of the first antennular segment, third extending up to third antennular segment. Fourth extending up to tips of stylocerite and fifth up to the mid-length of first segment of antennular peduncle.

Dorsal carination extending from middle of fourth abdominal somite up to end of sixth somite with a downward curved tooth. Telson without spine, sixth somite with 3 lateral cicatrices.

Petasma reaching the level of coxa of fifth pereiopods. Median lobe separated from lateral lobe by a shallow smooth depression, lateral lobe slightly curved ventrally.

Distal piece of *appendix masculina* is slightly longer than its width, symmetrical and oval, the distal half of anterior surface covered with small setae. Basal piece twice the length of distal piece.

Anterior plate of thelycum chisel-shaped, anterior portion slightly ridged, postero-ventral surface concave, posterior part wide and leaves a considerable gap to the seminal receptacle. A

Table 1: Distinctive characters of three related species of *Melicertus*

Features	*M. similis* sp. nov.	*M. canaliculatus*	*M. longistylus*
Carapace	Cervical sulcus reaching orbito-antennal sulcus from upper side of hepatic spine	Cervical sulcus not reaching orbito-antennal sulcus	Cervical sulcus not reaching orbito-antennal sulcus
First Pereiopod	Bears a short ischial spine	Ischial spine absent	Bears a short ischial spine
Telson	Without spine	Without spine	With 3 movable spines
Petasma	There is no disto-median projection	A short disto-median projection present	A prominent disto-median lobe present
Thelycum	Presence of a chisel-shaped anterior plate; a wide gap between lateral plates	Anterior plate absent, lateral plates placed close to each other with no space between the median margins	Anterior plate pentagonal, lateral plates placed close to eachother with no space between the median margins

wide gap between two lateral plates; dorsally these are concave; anteriorly they are narrow and curved on the outside.

Body colour: Body uniformly creamy white in preserved specimens.

Distribution: Known only from the type locality.

Etymology: The specific name '*similis*' relates to the similarity between the new species and *M. canaliculatus* in appearance.

Discussion: The new species is similar to *Melicertus canaliculatus* (Olivier 1811). A close examination also shows some similarities with *M. longistylus* (Kubo 1943). The structures of the petasma and the thelycum justify a distinct species status. The shape and size of the anterior thelycal plate is quite different. It is completely chisel-shaped in *M. similis*, nearly pentagonal in *M. longistylus* but absent in *M. canaliculatus*. Lateral plates are quite close in both *M. longistylus* and *M. canaliculatus* as compared to those in *M. similis*. Telson of *M. longistylus* has three pairs of lateral movable spines, but in *M. similis* there is no lateral spine. This character relates the new species to *M. canaliculatus* (Olivier 1811). These three species may be distinguished by the features listed in Table 1 and a diagnostic key for all the Indo-Pacific species of *Melicertus* which is given below.

KEY TO SPECIES OF *MELICERTUS*

1. Telson with movable spine 2
— Telson without movable spine 5
2. Presence of sulcus on post-rostral carina, one ventro-rostral tooth 3
— Absence of sulcus on post-rostral carina, one ventro-rostral tooth .... *M. marginatus* (Randall 1840)
3. Gastro-frontal sulcus bifurcate 4
— Gastro-frontal sulcus trifurcate .... *M. plebejus* (Hess 1856)
4. One ischial spine present on first pereiopod .... *M. longistylus* (Kubo 1943)
— Ischial spine on first pereiopod absent .... *M. latisulcatus* (Krishinouye 1896)
5. Anterior thelycal plate absent .... *M. canaliculatus* (Olivier 1811)
— Anterior thelycal plate chisel-shaped .... *M. similis* sp. nov.

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